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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/629,482	07/31/2000	Franz Josef Broecker	50487	4024
26474	7590	10/29/2003	EXAMINER	
KEIL & WEINKAUF			DANG, THUAN D	
1350 CONNECTICUT AVENUE, N.W.			ART UNIT	PAPER NUMBER
WASHINGTON, DC 20036			1764	

DATE MAILED: 10/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/629,482	BROCKER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Thuan D. Dang	1764	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 March 0822.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All   b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                             | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>6/11/07</u> | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of group II (claims 11-16) in Paper filed on 8/22/03 is acknowledged. The traversal is on the ground(s) that no undo burden will be placed on the office by examining all groups of claims together. This is not found persuasive because regardless of whether or not applicant(s) believe no undo burden would exist if all groups are examined together, applicant(s) have not shown that the alternative use for the apparatus proposed by the examiner is not feasible. Therefore, applicant(s) have not shown that the groups are not distinct.

The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 11, it is unclear in the preamble if there is any relationship between terms “a gaseous phase” and “one reactant is gaseous” and “a liquid phase” and “one reactant liquid”. In other words, it is unclear if the term “liquid phase” is referred to ONLY the “one reactant liquid” and the term “gas phase” is referred to only “the gaseous reactant”.

Also regarding claim 11, it is unclear if terms “the gas phase” and the “the liquid phase” on the generating step are referred to “gaseous phase” or “one reactant is gaseous phase” and to “liquid phase” or “one reactant liquid” in the preamble, correspondingly.

Also regarding claim 11, while in the preamble, applicants recite “one reactant liquid”, in the body of the claim which limit the claimed process, there is no the presence of this liquid reactant.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11, 12, 15, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 98/16463 (equivalent to US patent 6,375,920).

WO discloses a process of including a step of dispersing a gas stream 8 with a liquid stream 7 in the disperser 6 to generate a reaction fluid which is fed to a reactor including catalyst layers 3 substantially the same as the applicants' claimed catalyst. The reactor has wall which is surround by fluid medium, namely air. It is expected that the heat of the reaction faces away the wall. The product is then separated into a gas stream and a liquid stream which is partially recycled to the reaction via stream 18 (see the figure; the abstract; col. 3, line 5 thru col. 7, line 25 of the US equivalence).

The condition of the process as called for in claims 15, and 16 can be found on column 6, lines 28-43 of the US equivalence.

***Claim Rejections - 35 USC § 103***

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 98/16463 (also English Equivalence US patent 6,375,920).

WO discloses a process as discussed above.

WO appears to be silent as to superficial liquid/gas velocity. However, These parameters depend on the size of the reactor and selected conversion.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the WO process by selecting appropriate velocities of gas/liquid to optimize the process. Further, it is expected that using any velocities of gas and/or liquid would yield similar product.

### ***Response to Arguments***

Applicant's arguments filed 8/22/03 have been fully considered but they are not persuasive.

The argument that the prior art process does not involved a gaseous reactant and a liquid reactant , but rather than two gaseous reactants, i.e., oxygen and hydrogen is not persuasive since applicants do not claim so, in the claimed process applicants do not claim there is a liquid reactant. Instead, applicant claim "liquid phase" is dispersed with a gas phase. Further, applicant do not claim the presence of a reaction occurring between a liquid reactant and a gas reactant (see claims).

The argument that the prior art process is not operated under isothermal conditions is not pervasive since the term "isothermal conditions" cannot be located in the claims.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan D. Dang whose telephone number is 703-305-2658. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 703-308-6824. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Thuan D. Dang  
Primary Examiner  
Art Unit 1764

92629482.2<sup>nd</sup>  
October 24, 2003

A handwritten signature in black ink, appearing to be 'Thuan D. Dang', written in a cursive style with a large loop at the end.